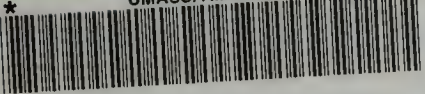


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BOWHUNTING THE BAY STATE

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B O W H U N T I N G

T H E

B A Y S T A T E

By

Dan McGuinness



Art work by Robert Thomasian.

The author is an avid bowhunter and freelance writer whose work has appeared in "The Outdoor Message," "Mass. Out-Of-Doors," "Massachusetts Wildlife" and "Outdoor Life" magazines.

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PREFACE

Before bowhunting in the state of Massachusetts, be sure to refer to the pamphlet entitled, "Abstracts of the Fish and Wildlife Laws" for the current year. The free pamphlet is available at Division of Fisheries and Wildlife Field Headquarters in Westboro, or wherever hunting and fishing licenses are sold. The section on archery regulations governs the selection and use of bowhunting equipment by imposing minimum safety requirements for the bowhunter.

In addition to a hunting license, the bowhunter must have an archery-primitive firearms stamp which must be adhered to the back of the license to hunt deer. The license must be displayed in a visible manner on outer clothing while hunting.



INTRODUCTION

During the past few years, there has been a dramatic increase in the number of bowhunters afield during the hunting seasons. The reasons for the increase are perhaps as numerous as the sportsmen themselves. According to William Wadsworth of the National Bowhunter Education Foundation, "Philosophically speaking, it represents man's effort to recreate an aspect of his history when he was bound more closely to nature than he is at present. Also, as weapons became more effective, man imposed, by using primitive weapons, more limitations on himself to maintain the essential character of the hunt rather than transforming it into pure killing and destruction."

There are many elements of satisfaction which comprise a successful hunt. The opportunity to go afield and, for the time being, forget the rigors of the every-day world, the social interaction afforded by contact with fellow hunters while camping, practice shooting and planning hunting strategies; the opportunity to see and hear animals undisturbed in their own habitat are all rewards of the hunt; filling the game bag or tag is just a bonus! Perhaps the greatest benefit derived from bowhunting deer is that bow season precedes and is longer than the shotgun season, giving bowhunters more time afield in their attempt to match wits with the wily whitetail. There are fewer bowhunters in the forest during bow season than gunners during shotgun season which translates into PRIVACY! There are few things on earth less welcome than a slow parade of hunters trickling past the tree in which you've been shivering since first light!

Regardless of your reason(s) for bowhunting, it is an enjoyable and highly rewarding experience when done safely and with respect for the game you hunt, the environment and the landowner.

This booklet is designed to help the bowhunter increase his pleasure afield while participating safely in one of history's oldest traditions. It is not my intent to teach the fundamentals of archery; for those, I would refer you to an archery pro shop--not a store with a sporting goods department which happens to sell bows and arrows--although these stores may carry good equipment. The pro who specializes in archery equipment will have many brands of each type of equipment and will teach you the basics of archery (often for a fee) and help you to select equipment with which you will be most comfortable. My intention is rather to show the archer or beginning archer how to apply the fundamentals of archery to bowhunting.

In Massachusetts, any game which can legally be hunted with a gun can also legally be hunted with a bow during the open season for that species. Small game and birds offer challenge and excitement but for the vast majority of sportsmen, the term "bowhunting" means deer hunting with a bow. For that reason, most of the material in this booklet is directed toward the deer hunter who for his own personal reason(s) chooses to match his woodsmanship against one of the most elusive game animals in North America--the whitetail deer!

Good hunting!

ACKNOWLEDGEMENTS

I wish to thank Ellie Horwitz for all her assistance and understanding, Jim McDonough and Jim Cardoza for technical assistance and biological information, Bob Thomasian for his sketch work and most of all, my wife, Sharon, for both tolerating and supporting me during the writing of this book.

I also wish to thank all the people at the Division's Field Headquarters in Westboro for their generous assistance.

WHITETAIL DEER



There is a large number of game species which can be hunted with bow and arrow in our state, but most popular by a wide margin is the white-tailed deer (Odocoileus virginianus borealis). The whitetail is the only native species of deer found in Massachusetts. The rare fallow deer (Dama dama) was introduced to Martha's Vineyard in 1932. Fallow deer are present in the state where they have escaped from private collections. For this reason, whenever the word "deer" is used, it refers to the whitetail.

Whitetails are creatures of habit. They spend their entire lives within a one to one-and-one-half square mile area unless forced to move by extreme circumstances brought upon them by urbanization, severe hunting pressure, or total destruction of their habitat. I use the words "extreme" and "severe" because although whitetails have a reputation for being the wariest and most elusive of all deer, they are also the most adaptable. This allows them to live in close proximity to man while avoiding direct confrontations quite successfully. Whitetails have been known to starve rather than move from their area when food supplies become depleted whereas other members of the deer family, such as elk, would seek new habitat.

Deer are forest edge animals. Consider an expanse of mixed hardwoods, conifers, small stream beds and occasional swampy areas and small to large openings. The openings may be scattered brush and grasses, clearings or large pastures which are surrounded by the denser forest. These openings provide most of the food for the deer and the dense woodlands provide seclusion for escape routes, travel and bedding. Mature deer rarely stray far from dense cover. They move following an edge, always staying within one or two bounds of the safety of the thicker forest. Wherever possible, the mature deer feed exclusively in small openings within dense hardwood or swampy areas without ever coming into the open. This is one reason why extensive preseason scouting is important if one expects or even hopes to take a deer.

It is important for any deer hunter to know what the deer's diet consists of. For this reason, the hunter should know what foods are indigenous to the area and available in abundance. A partial foods list would include acorns, twigs, buds and leaves of aspen, beech (nuts are gleaned when available), birch, dogwood and maple, as well as ferns, clover, grasses, cedar, hemlock, apples, corn, mushrooms and excess farm products where available.

Deer do much of their feeding at night, with or without moonlight. The eyes of the deer contain millions more light-gathering rod cells than do those of humans and, therefore, are designed for maximum utility under low light conditions. Although believed to be color blind, deer can detect even the slightest movements and changes in their area. The length of the feeding periods is determined by the availability of foods. A mature deer requires a minimum of five to eight pounds of good food daily for its maintenance diet and will forage until sated. During the winter months, food consumption is reduced by about half by the mature deer while the fawns must eat enough to continue to grow. Hunters find deer feeding mostly during the first few hours of daylight and again in late afternoon as dusk approaches.

The deer possesses extremely keen hearing and can detect the snapping of a twig at great distances. Its ears can swivel toward the direction from which a sound is heard so a cautious approach by the hunter is mandatory.

The most acute of all the senses is the deer's sense of smell; it is his key to survival. The deer relies on its sense of smell to locate food, water, other deer, predators where they exist and, of course, MAN! The bowhunter must learn to hide his scent from his quarry by staying downwind and/or above where the deer is expected to appear and by the use of chemical scents designed to attract the deer or at least mask the scent of the hunter.

The acuity of the deer's senses and its ability to react quickly to the information they provide is only a part of the picture. According to Game Biologist James McDonough, the deer's survival can be directly attributed to its ability to adapt and to hide successfully which has led to large deer populations even in heavily-populated states. It is easy to recognize why the elusive whitetail is North America's most popular and challenging big game animal!

Perhaps the most exciting aspect of deer behavior is the change that occurs preceding and during the mating season (often referred to as the "rut"). The wildlife enthusiast and hunter who understands the way the rut affects deer behavior will see many more deer during the fall than will those not attuned to the seasonal change. By August, antler development stops and the long daylight hours have spurred production of the male sex hormone, testosterone. The advent of fertility causes the antlers to harden and their outer coating of velvet to dry. This velvet is a membrane which covers the growing antlers and contains a close network of blood cells. After the blood

supply to the antlers is cut off and the velvet dries, the deer rubs his antlers on small trees and saplings to rid himself of it. This rich, fibrous velvet is not discarded; it is usually eaten by the deer immediately after it is shed. Since the rut involves increased aggressiveness in the buck, rubbing can become violent. Often the antler-rubbing buck appears to simulate fighting by attacking his rubbing tree while twisting his antlers in any overhanging branches. Rubbing helps to strengthen the muscles of the neck which provides swiftness in fighting.

Actual fighting seldom occurs. The deer have associated with each other all year and dominance has already been established. When an intruding buck enters or a younger buck challenges in an effort to mate with does, the dominant buck of the group will meet the challenge with a series of visual threats. Usually the bucks squat and extend necks and heads and stare fiercely at one another. The muscles are flexed and the hairs along the back and neck are noticeably erect. The ears are usually laid back against the neck. Bucks are extremely dangerous at this time. If the challenging buck does not flee, the two deer sidle toward each other exposing their chest areas in a daring "come and get me" posture while emitting low, grunting sounds. This is usually enough to send the inferior buck running. If, however, the deer are similar in size and apparent strength, a lightning fast charge will occur, occasionally breaking antlers or on very rare occasions, the impact will be so great that the antler beams will lock the deer together until both suffer a slow and agonizing death. This is extremely rare, however, and is mentioned only as a point of interest.

Unlike rubs, which are usually done on different trees throughout the buck's range and then forgotten, scrapes are visited often and deserve an in-depth study. A scrape is an elliptical or fan-shaped patch where the buck has torn up the earth with his hooves. The scrape is so named because all the leaves, twigs and grasses are scraped away leaving only bare dirt which shows up readily against snow or the surrounding light brown, yellow and red leaves which have fallen to the ground. A scrape can range in size from approximately one to four feet across at its widest point. The buck pivots around and thrashes at the ground while clearing it with his hooves and then implants a hoof near the center of the scrape. He now squats down and urinates into the scrape and, rubbing his hind legs together, deposits scent from his metatarsal gland into the scrape. This is the buck's "calling card," identifying him to any doe about to come into estrus. A doe approaching estrus will seek out the buck's scrape and deposit her scent in a similar manner. The buck will return to his scrapes periodically, sometimes several times in one day. If a doe has visited and announced her receptiveness, the buck will follow her trail until they meet. If the doe is in estrus, mating is likely to occur. If the doe is very near estrus, the buck will sometimes court her until she accepts his advances. Scrapes, therefore, are not merely an indicator of where a deer has been; they indicate a place where a deer is likely to reappear. Scrapes are usually found in groups of three to five in the core of a buck's area and are often found beneath branches which hang three or four feet above the ground.

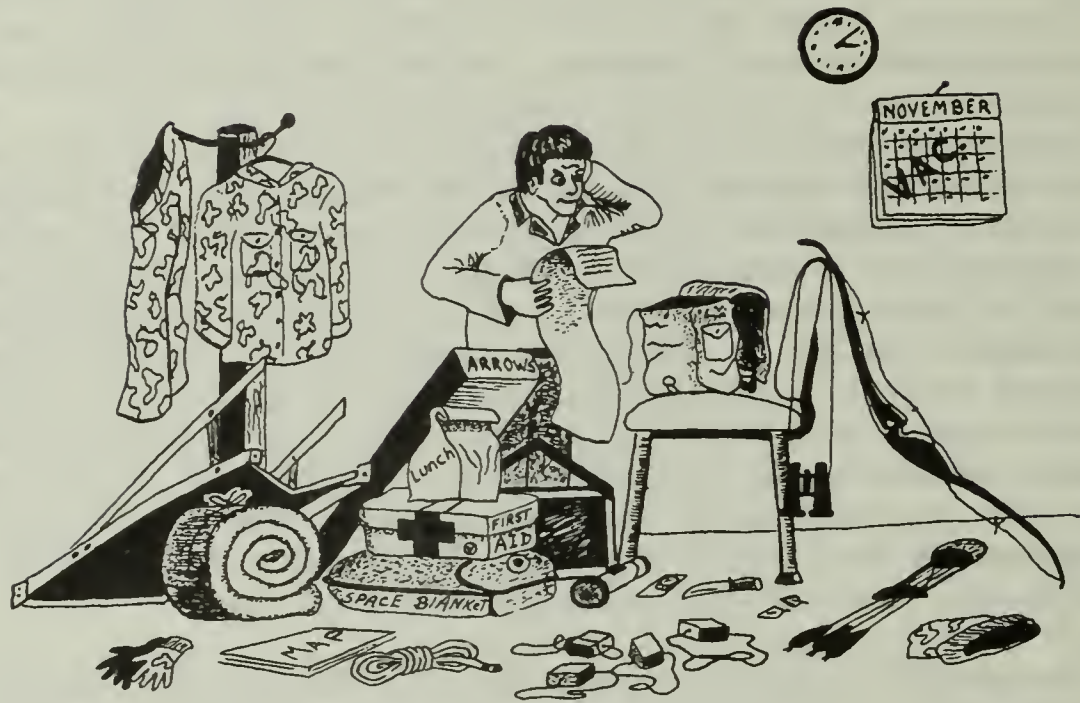
The buck will "hook" these branches with his antlers, twisting and tearing them. The buck also leaves saliva deposits on leaves and branch tips and will often rub its preorbital glands (trenchlike slits in front of each eye) on the small branches. Although most biologists consider these glands to be of little value in producing scent, it is done frequently enough to bear mentioning.

During the mating season, the rutting bucks and estrous does become preoccupied with mating to the point where they tend to disregard the subtle clues which would normally spell danger and thus they often make a costly mistake to the benefit of the hunter.

Bucks come into rut long before the majority of does and become frustrated and irritable. Behavior is unpredictable, unstable. The rutting deer is not the docile, timid creature found at a local petting zoo or in a Disney film. Subject to raging hormonal influences, deer can be extremely dangerous. The buck will usually walk all day rubbing and scraping in search of receptive does and will not stop to eat or bed down for more than a few minutes at a time. During the rut, a buck may lose 25 to 30 percent of his body weight while chasing does, which leaves him exhausted and weakened for the oncoming winter. It is for this reason that nature often claims the lives of the largest and most sexually active bucks when winter snows and temperatures put most foods out of reach.

This brief synopsis of deer behavior in the fall should provide ample clues for the astute beginner. Bucks travel more than many sportsmen realize and can be seen and taken at any time of day. When your hunting companions suggest you meet at camp for lunch, you might politely decline and bring your lunch in with you. The largest buck I ever hit was checking a scrape 25 yards in front of me at 1:15 in the afternoon. I was seated on the ground, resting in a promising spot surrounded by scrapes. It was my intent to sit quietly until late afternoon when deer activity would increase. Suddenly, I saw a head bearing 10 full points protrude from an opening in the thick cover, look around and then withdraw. I was able to get up on one knee when the massive buck appeared from around a dead tree and walked over to his scrape. The release was smooth and the arrow struck home, sending the startled deer into the brush. On the way out of the forest, I saw no less than four other deer--all at a time when the majority of bowhunters were back at camp exchanging strategies!

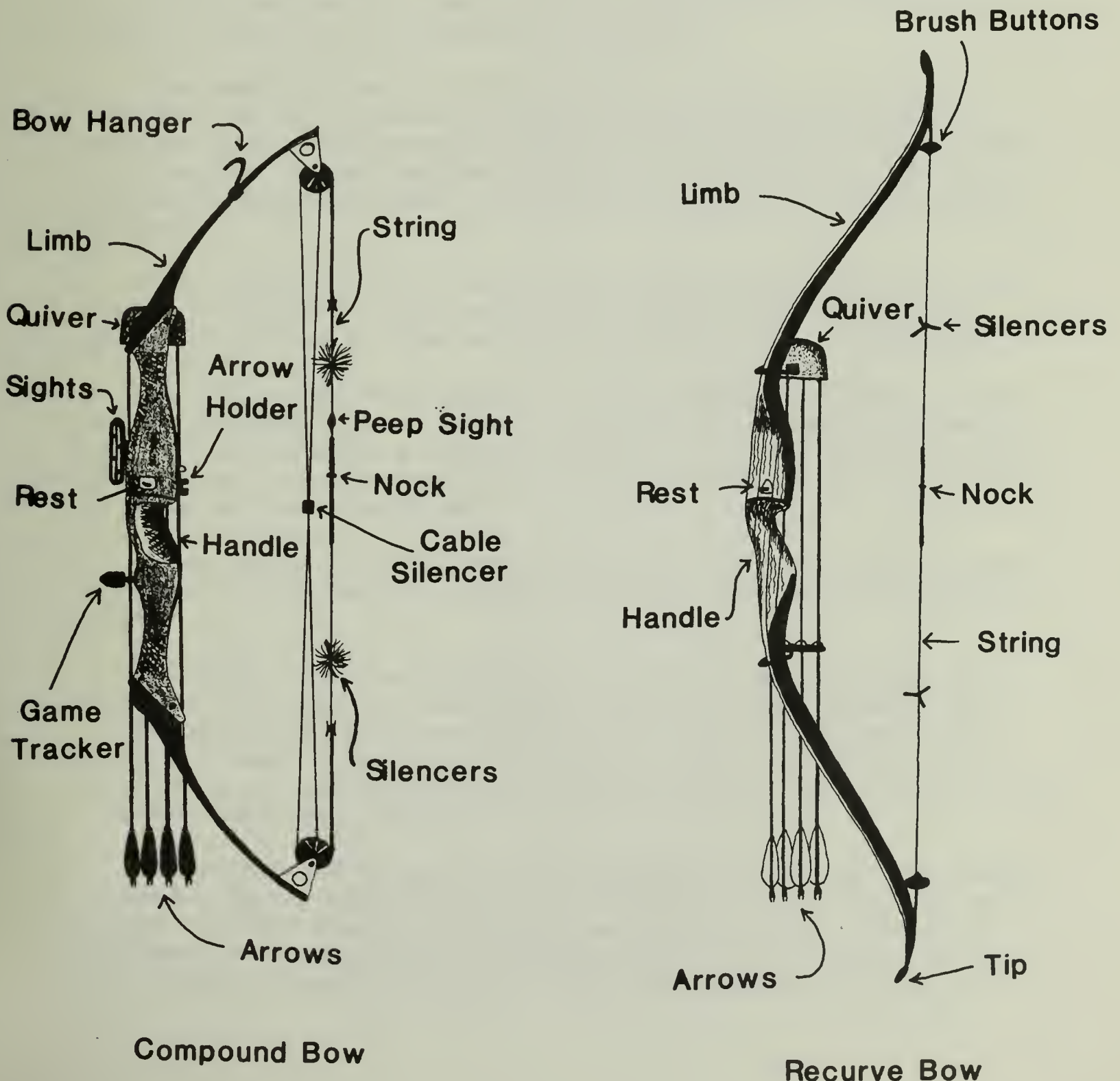
BASIC GEAR: WHAT TO BRING



1. BOW set up with quiver of arrows
2. BOW STRINGER
3. BOW STRING, extra
4. CANTEEN or other unbreakable water container
5. DEER LURE (optional)
6. COMPASS
7. FILE or stone for sharpening broadheads, or replacement blades for razor type heads
8. FIRST-AID/SURVIVAL KIT, including first-aid manual and emergency rations
9. FLUORESCENT tape or ribbon, or toilet paper

10. PEN for filling out deer tag portion of license.
11. PENLIGHT for use in moving in and out of the woods during darkness. This not only helps the hunter to find his way through the forest, it also serves to identify the hunter as such and not game in the event he should pass near a hunter who would attempt to take game illegally during darkness. NOTE: The use of artificial light for hunting any bird or mammal except opossum or raccoon is strictly prohibited.
12. ROPE, 12-foot length, for dragging deer or bear from the woods*. A second length of rope is needed as a shooting safety line if hunting from a tree stand, and a third rope, five feet longer than the height of your stand, as a hauling line for your equipment.

* In lieu of rope, a commercial dragging system may be useful as it allows the hunter to drag his game with his torso, leaving his hands free to carry bow and other light gear.



13. SIGNAL, audible, such as a policeman's whistle or a small boat horn.
14. SIGNAL, visual, penlight, mirror and/or reflective aluminum, blanket in case lost or injured.
15. TOPOGRAPHICAL MAP of the area you intend to hunt.
16. URINE CONTAINER, unbreakable, with leak-proof cover.
17. WEATHER INFORMATION before leaving camp to insure appropriate clothing selection.

These are a few of the items one can bring afield for bowhunting. If space permits, extra food and clothing should be a consideration.

BOWHUNTER ACCESSORIES

There are a number of useful accessories currently available to the bowhunter. This list represents but a few:

ARROW HOLDER: The arrow holder adheres to the back of the bow, opposite the sight window. It is designed to hold the nocked arrow in place on the rest. This eliminates the need to hold the arrow in place with the index finger of the bow hand, thereby eliminating pressure which could loosen or remove the rest. When the archer begins to draw the arrow, the arrow holder springs free of the shaft smoothly and quietly.

BOW CAMOUFLAGE: Camouflage (camo) comes in various forms from a number of manufacturers. Some form of bow camo is necessary to help eliminate glare and break up the outline of the bow.

Camo spray paints provide total coverage and eliminate all glare. They can be purchased at an archery pro shop or, in some instances, the pro shop personnel will custom paint your bow for a moderate fee. If you are considering a paint job, be sure to allow two to three weeks for the odor of the paints to dissipate.

Also available are the cloth type limb covers. Those designed for long bows and recurves fit like socks with elastic gathers at each open end. They are quiet, removable and adequate. Limb covers for compounds are similar except they are open the full length and are closed around the limbs and fastened with snaps or hook and eye fabrics.

Also available are camo waxes and creams which are efficient but require more time to apply and remove. Make certain the one you choose is odorless or allow ample time for the odors to dissipate.

Camouflage tape can be applied to the limbs of any style bow but can mar the finish of the limbs if not applied and removed properly. This tape does provide a non-glare finish and a camo pattern suitable for any game (providing the colors of the pattern represent the colors or shades of the surroundings).

If you choose the cloth type limb covers for your bow, a camo wax or cream on the areas not covered by the cloth can help to eliminate glare.

BOW HANGER: The bow hanger is a hook-shaped metal device which looks like the head of a coat hanger. It is affixed (usually with rubber cement) to the non-working section of the upper limb of the bow and is usually coated with plastic or rubber to eliminate glare, noise and rust. The stand hunter merely hangs his bow vertically from a nearby branch until needed.

BOW HOLDERS are designed for the ground stand hunter. The holder is stuck into the ground and the bow is cradled in its uprights until needed. Another type of bow holder, more like a sling, is worn by the hunter. The lower limb is supported by a "cup" or strap and the bow is held upright by the hunter. The main benefits of using bow

hangers and/or holders are: the elimination of fatigue and ready accessibility with a minimum of movement. Whether or not you use a bow hanger or holder, it is important to keep the eccentrics and cables of compound bows from coming into contact with sand or dirt. Even a few small particles of sand can make a lot of noise when crushed between the cable and the eccentrics as the bow is drawn. Obviously, this is not good for the bow parts involved.

HUNTING SIGHTS: Hunting sights, like target sights, are calibrated by the bowman at fixed, known distances. Hunting sights are mounted on the front of the bow in the upper section of the sight window. The sight uses one or more threaded pins which can be individually adjusted for both elevation and azimuth. The end of the pin is usually a round bead or a wire ring. The wire ring type has different sized rings which are designed to estimate range of the target. The largest ring is at the top of the sight bracket and is used for the closest target. The hunter uses the ring which most closely covers the outline of the target (in this case, the deer's chest area).

With either type of sight, when the pin is placed over the center of the target and the arrow is released properly, if the arrows enter the target in a group away from center, move that sight pin in the direction of the group from center. In other words, if you are grouping your arrows low and to the left, move your pin down and to the left. Continue to tune your groups to center for each pin with a distance between each pin of 10 or 15 yards. When you have finished, the center of each bead or ring should be in a straight line with the ones above and below it.

Lighted sight pins are similar to regular pin sights except that they are fitted with a miniature battery and the bead is a light-emitting diode (LED). This is designed to allow the bowhunter to see his sight pin under low light conditions. Before purchasing a lighted pin, consider the actual amount of time spent hunting LEGALLY when a lighted sight pin would help.

Peep sights are not specifically designed for bowhunters but they deserve attention due to the number of bowhunters who use them. A peep sight is a plastic or rubber aperture sewn into the bow string. It provides a fixed rear sight much like that of a rifle. At full draw, the peep sight turns toward the archer's eye, providing a rear sight. If the draw length varies or there is too little or too much torque put on the string by the hunter as he draws, the aperture will not align properly with the eye. This is a good guide to developing a consistent draw but can be a handicap in the field. If you decide to use a peep sight, become totally familiar with it long before hunting season!

RANGE FINDER: The range finder determines for the hunter how far he is from his game. Since the hunter has little time once his game comes into view, the range finder is most effective when used before game approaches. The hunter estimates the range of openings and trails as well as trees and rocks in the immediate area. By determining his distance from the landmarks, he can determine which sight pin to use should game come within range. Operation is simple; just aim and focus as you would a camera or binoculars and the range finder will indicate the distance.

SILENCERS: Silencers are designed to reduce unnecessary sounds caused by vibration when the arrow is released. There are two basic types of silencers: those which quiet the string, and those which (on compounds) reduce cable noise. String silencers can be the yarn-type puffs or the rubber type which are fitted to the string. Both types are used in pairs, fitting the string with one on each end midway between the center and end servings. In a pinch, several rubber bands tied to the string will suffice.

One type of cable silencer is a metal guard attached to the back of the bow handle with a metal rod running perpendicular to the cable and string. This guard pulls the cable back away from the sight window providing more clearance for vanes or fletching while reducing cable noise. Another type of cable silencer is a small plastic device which snaps on the cable near the point where the cable intersects itself creating a fixed gap which prevents cable friction and absorbs noise-causing vibrations. A third type of cable silencer is a felt tape with adhesive backing. The tape is wrapped around the cable sections at and near the point of intersection. All types eliminate both noise and excessive wear of the cable. A light oil should be used on eccentrics to eliminate noise and wear.

STABILIZER: A stabilizer is a weight or weighted rod screwed into the bow handle below the sight window. For maximum effectiveness, it should extend forward beyond everything else on the bow. True to its name, the stabilizer makes the bow more stable in the archer's hand by adding weight and lowering the bow's center of gravity, while also absorbing vibrations. Bowhunting stabilizers are usually shorter than those used by target archers and are often painted with a camouflage pattern.

TRACKING DEVICES: Although bowhunters should become proficient at following a blood trail, either through helping other bowhunters track wounded game, or through the National Bowhunter Education Program, there are times when a tracking device is practical if not essential. In the few minutes before dark or in the rain, a blood trail can be anything from difficult to impossible to follow without the aid of a tracking device. One type of tracker fits an arrow shaft internally with a bobbin of fine thread which is passed through a hole drilled into the hollow shaft near the nock and attached to the bow with Velcro pads. When the game is hit, the thread unwinds, leaving a fine white line to follow to the animal. The line is extremely thin and nearly invisible. If the line should break or disconnect from the bow, you may have more trouble finding the line on the ground than finding those microscopic droplets of blood. Another game tracker has a cylinder which can be mounted in the bow's stabilizer hole or in the same holes as a bow sight. Threaded adapters for each mounting position are included, making the mounting location the option of the bowhunter. The cylinder contains a bobbin of several hundred yards of sturdy, lightweight line, the end of which is tied to the broadhead above the threads and held securely when the broadhead is screwed into the arrow shaft. When the arrow is released, the line (which is core wound) feeds out with very little resistance. An added bonus is that the hunter can tell when his quarry has stopped running, simply by

watching for the line to stop feeding out of the cylinder. If either tracker is used, never sever the line until you have recovered your game. Make certain you retrieve all line. Do not have it litter the woods.

NOTE: The use of release aids for hunting is illegal in Massachusetts.

HUNTING METHODS



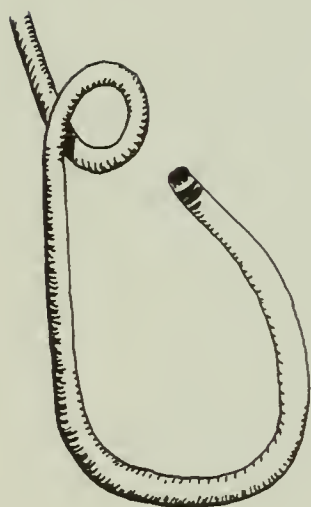
There are basically four methods of bowhunting deer: stand hunting, still hunting, stalking and driving.

STAND HUNTING is the most popular method of deer hunting whether with bow or gun. A stand, essentially, is any fixed setting where the hunter awaits the passing of game. The bowhunter, bedecked in full camouflage, will locate or construct a blind in an area overlooking game trails, feeding or bedding areas. The hunter's blind and camouflage must blend into the surroundings. The stand hunter will usually position his back against the trunk of a large tree so that

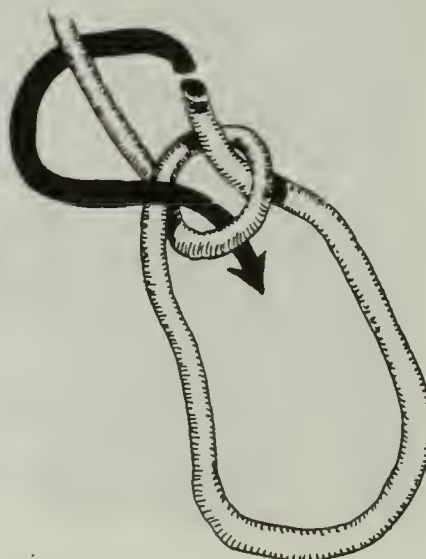
he is not silhouetted against the background or sky. The most important element is the wind. Check wind direction by holding sand, pine needles or thread head high and drop it to the ground. You do not want to be upwind of the deer. If your stand is on the ground, scrape away all leaves and twigs so that if you must move to position yourself for a shot, you can do so noiselessly. Always remember to re-cover the ground before leaving.

Tree stands are usually eight to 15 feet above the ground, with 12 feet being about average. This elevation above the deer provides a wide field of view and helps keep your scent above the deer. Since you are high above the deer, you are less likely to be seen if you make slow and deliberate movements. There are some cautions with tree stand hunting which are very important. Never use a manmade tree stand which already exists. If it belongs to someone else, a good sportsman must relinquish the stand to its rightful owner upon demand which will mean looking for another place to hunt. Also, if it is an old stand, yours or one that you have discovered, the old wood may be rotted and incapable of supporting your weight. The best approach is to always use a portable tree stand which does not damage the tree. This means no nails or wire can be used to attach the stand to the tree. Nails and wire can not only damage the tree, they can ruin a chain saw and cause serious injury to a woodcutter. Never use nails or wire without permission of the landowner.

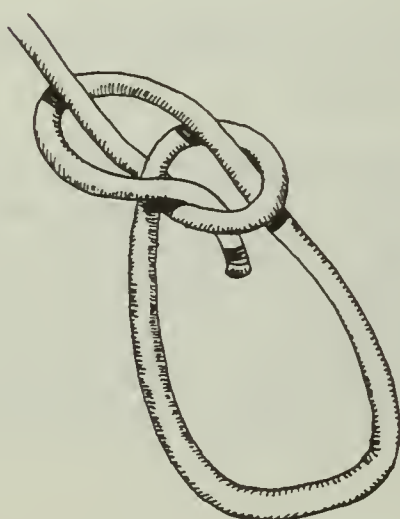
Always tie a rope to your gear and connect it to your belt and climb to your stand empty handed. Once in the stand, tie a safety line around your waist and around the tree with a bowline knot.



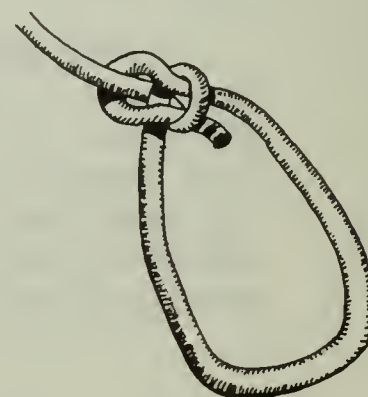
Step 1



Step 2



Step 3



Step 4

THE BOWLINE

This will allow you to lean forward for a shot without falling to the ground. Once in the tree and secured by a safety line, haul your equipment up to you and untie the rope. Do not drop the rope to the ground as you will have to lower your gear to the ground before making your descent. Before shooting from your stand, be certain there are no obstructions which could deflect your arrow or interfere with the operation of your bow. Remember the proper way to aim from a tree stand as discussed in the section on practicing in this booklet.

STILL HUNTING. A still hunter must move very slowly and quietly with frequent stops to study the area ahead and to the sides. Much more time is spent looking and listening for deer than walking. The hunter must detect deer before he, himself, is detected if he is to have an opportunity to shoot. Do not look for a whole deer. Often all one will see is a leg, an antler, an ear, or the swish of a tail. Be very sure that it is indeed a deer. Once the deer has been spotted and its identity verified, the hunter must either wait in hope that the deer will pass nearby or begin a very careful stalk.

STALKING is an attempt to sneak within range of a deer, and it occurs after a deer has been seen by a hunter. Stalking requires a great deal of patience and skill on the part of the hunter. If the deer detects the bowhunter's presence, it is usually time to seek another deer!

DRIVING deer is the least effective method of bowhunting. One or more hunters take a stand where the deer are expected to exit while others slowly push the deer from another area. If the technique is to work, the drivers must be careful not to drive the deer too fast as a deer which is highly alarmed is likely to attempt escape along an unpredictable route. Most shots taken during a deer drive are at a running deer and a bowhunter will usually miss the deer or, even worse, wound it. Driving is not recommended for bowhunters.

If I were asked to provide a series of tips or suggestions for the novice bowhunter or deer hunter, the list would go something like this:

1. Know the area you intend to hunt. Preseason scouting is the only way of knowing where the deer are moving prior to opening day.
2. Do not look for a whole deer when hunting. Learn to single out parts of a deer when scouting. An ear, leg, antler, and so forth, may let you detect a deer before it detects you. Look for a horizontal line in the thick cover; it may be the top of a deer's back. Most of the forest's features will be vertical and a horizontal line in its midst is not difficult for the trained eye to see.
3. Hunt to and from your favorite spot. Many hunters crash through the woods to arrive at their stands only to alarm any deer within earshot of their presence. If you sneak to your spot, you may get a shot at a deer which otherwise would have heard you and vanished.
4. Be a safe hunter. Nothing can ruin a hunt faster than a hunting accident.

5. Hunt for the entire day. When the deer stop moving, the hunter should start. Avoid going back to camp or your vehicle for lunch.

6. Keep your scent away from the deer by staying above and downwind of them, and/or by the use of one of the scents available for such a purpose.

7. Become the best you can be with the gun or bow you intend to use when hunting.

8. Learn to pick a spot at which to shoot. Never shoot at a whole deer; pick a spot in the center of a vital area and hit it.

9. Learn as much about your game as possible before hunting. A new hunter can learn much by reading the many books and magazines available on the subject, and by listening to successful veteran hunters. Learn while scouting and hunting by noticing what the deer are eating, where their runs are, and where they bed down.

10. Keep all sounds and movements to a minimum while hunting. All movements should be deliberate and in slow motion to avoid spooking deer in or approaching your area.

BOWHUNTER'S QUIZ

1. How is a deer's age determined?
2. Explain the difference in antler structure between the mule deer and the whitetail.
3. How tall is the average whitetail at the shoulder?
4. What is the major contributing factor to antler size and development?
5. Other than constant vigilance, how can you tell if deer are using a particular run?
6. A deer is approaching nervously. How do you know when it is going to run?
7. A deer suspects your presence but has yet to identify you or your location. As it lowers its head to feed, you prepare to draw your arrow, when suddenly the deer jerks its head upward, stops chewing and looks around. This happens several times. How can you tell when the deer is about to raise its head again?
8. When are most fawns born?
9. You are hunting on unposted land when the landowner identifies himself and asks you to leave. What must you do?
10. A deer comes past your stand. You hear your arrow's thud as it intercepts the deer, and 30 yards away, your quarry falls into a lifeless heap. When you near the deer, you notice that your arrow entered far back in the stomach area, but another arrow protrudes from the chest on the other side of the deer. Who has rightful claim to the deer?
11. While on your stand, you hear a deer crashing through the brush toward your position. As it comes into view, you see it is being harassed by a small pack of dogs. You know that in a few seconds they will all pass within 10 yards. Do you shoot? At the deer? At the dogs?
12. An anti-hunter argues that hunting is inhumane and that deer should be protected before sport hunters skill them all. Convince him he is wrong in terms of habitat and game management.
13. A monstrous buck stops broadside 15 yards from your stand. Your heart pounds violently, your knees tremble and your respiration rate increases. You draw and release and watch your arrow sail over the deer's back, yet you know your release was smooth and there was nothing between you and the deer to deflect the arrow. What happened?

14. As you break camp after a couple of days in the woods, you must find somewhere to dispose of your trash. What should you do with it?
15. If dressed weight is known, can the live weight be determined?

Answers on Page 39.



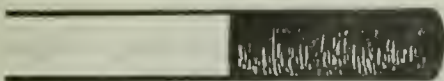
BOWHUNTING SAFETY



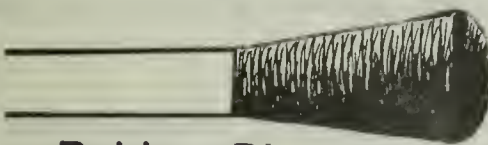
Target Point



Field Point



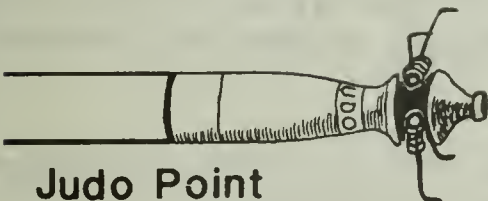
Steel Blunt



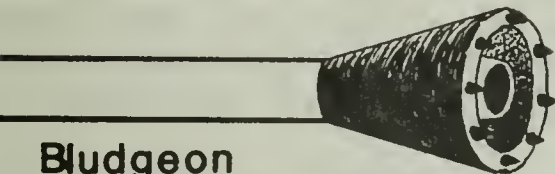
Rubber Blunt



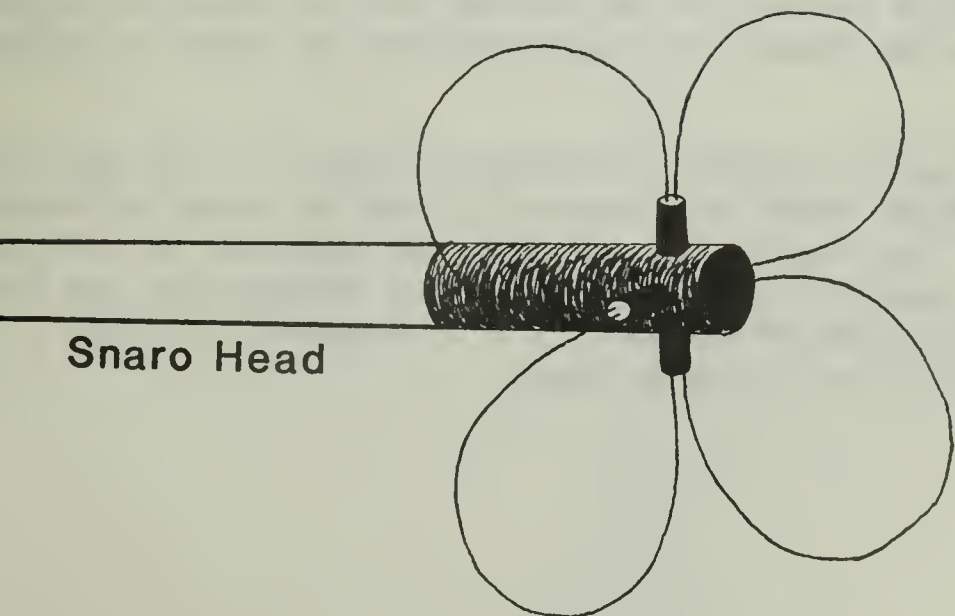
Broadhead



Judo Point



Bludgeon



Snaro Head

An arrow equipped with a broadhead is as lethal as a bullet when fired, and far more dangerous in itself. The bullet or shot shell is relatively safe until loaded into a gun. The broadhead, however, becomes dangerous the moment it comes into one's possession! For the broadhead to work effectively, it must be as sharp as a well-honed razor. Unlike a bullet, which must be discharged, a broadhead, when handled improperly, can cause a fatal wound without ever being nocked on the bowstring. In fact, there is a report of a bowhunting guide who killed a grizzly bear with a hand-held arrow while he was being attacked.

A broadhead kills by cutting veins and arteries, causing internal hemorrhage and organ dysfunction due to a lack of fresh, oxygen-rich blood. Once the circulatory system fails to deliver oxygenated blood to the organs and ultimately the brain, the result is death.

Now that we understand how the broadhead works, we will easily see the danger involved in handling one. The National Bowhunter Education Foundation recommends that the bowhunter's (bow-mounted) quiver should always feature a protective cover which completely houses all broadheads and keeps the arrows under tension to eliminate the possibility of serious injury should the bowhunter fall on his equipment. Fortunately, most archery manufacturers share the sentiment and nearly all bow quivers feature the cover and tension systems.

These safety tips are borrowed from William Wadsworth's "Bowhunting Deer:"

1. Always be certain of the flight path of your arrow. Never shoot skyline shots where an arrow can disappear over a hill or ledge.

2. Always check carefully for damage or defects in your equipment. A cracked bow limb, frayed string, or cracked wooden shaft, for example, can inflict serious injury.

3. Before climbing a tree, crossing a ditch, or negotiating a fence, remove your arrow from the string and place it securely in the quiver; then pass your bow to a companion or use a hauling line.

4. When walking with a companion, do so with arrows in the quiver and not on the bowstring. A gash in the leg could result, causing serious or fatal injury.

5. When field dressing a deer, be careful of broadhead blades which may be in the deer's body cavity. If the arrow you fired was not recovered, or if one or more blades is missing, assume they are still in the deer.

6. Never shoot an arrow straight up into the air! The arrow carries enough energy in free fall to penetrate the skull.

7. Never shoot until you have positively identified your target. Remember that bowhunters are camouflaged and blend into their surroundings. Unless you are certain what you see or hear is a deer moving under its own power (and not being dragged out of the woods by a successful bowhunter), do not shoot. Better yet, don't even draw.

8. Always use a suitable backstop behind your practice butts. Make a physical check behind and all around your practice area each time you intend to use them to be sure the area is clear of children and pets.

9. Although not an element of shooting safety, it is important always to tell someone where you intend to hunt and when you expect to return. Remember any medication you might be supposed to take and, if hunting with a companion, know his physical limitations and medication requirements. Never hunt while under the influence of alcohol or other drugs which can alter one's perceptions.

10. Whenever a hunting accident occurs, take proper first-aid measures (you should know them and carry a first-aid manual in your pack), then immediately notify local or Massachusetts state police, or a Natural Resource officer for assistance. They are trained professionals who will know what to do in case of such emergencies. This is more than simply a good idea; it is the law.

LANDOWNER RELATIONS

It is impossible to overemphasize the importance of hunter-landowner relations. Each year, more privately-owned land is posted. It must be the result of the millions of dollars spent each year by the antihunting people--you know, the people who don't hunt and don't want you to hunt either. Right? Wrong! Although the "antis" spend millions annually to lobby, advertise and actually harass hunters in the field, the real culprit is the slob hunter!

In 1980, at a town meeting, property owners in the Town of Petersham, Massachusetts proposed closing the entire town to hunting! Consensus was that if they were successful, the surrounding towns might rapidly follow suit. Fortunately for hunters, the proposal was defeated, but certainly the issue is not dead.

Among the reasons cited for the proposed closing were the following:

1. Hunting on posted lands.
2. Driving through private fields, over private roadways and backyards.
3. Parking in front of access ways, in driveways and on the lawns of residents.
4. Shooting too close to buildings, roads and livestock areas.
5. Littering along roadsides, in the woods and in private yards.
6. Vandalism, such as removing and/or defacing signs, gates and fences.

Very few complaints were made against hunters or hunting in general. The complaints were valid and deserve attention. There is no justification for any of these abuses. Private property is just that! And any hunter using it is a guest.

If you wish to hunt on private land, ask for permission well in advance of hunting season. Even posted lands can be opened to hunters who create the right impression on the landowner. Some people simply wish to exercise control over who hunts on their property.

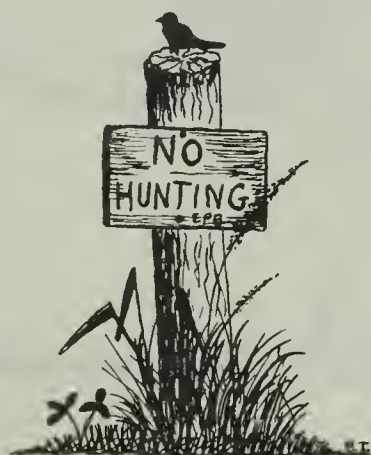
It is up to all hunters to be responsible sportsmen and here are some guidelines!

1. Always ask permission to hunt private lands whether posted or not.
2. If a landowner asks you to leave his property, do so at once whether or not the land is legally posted.
3. Obey all game laws at all times, paying particular attention to legal required shooting distances from roads and buildings and legal shooting hours.

4. Report any game law violations or vandalism to which you are a witness.
5. Whenever hunting private property, ask the landowner where he would like you to park. Never park on someone's lawn or field or block barwyas, roads or driveways. Always close gates and barways after access.
6. Do not litter. Bring a plastic bag for trash so that you bring out of the woods everything you brought in. After leaving, dispose of the trash in an appropriate receptacle. Do not bury your trash in the woods, as any animal which smells the buried "treasure" may unearth it, scattering refuse all over the woods.
7. Do not shoot at, remove, or deface any signs, fences or any fixtures which may appear "target worthy" or seem a good outlet for frustration.
8. Discourage friends and fellow hunters from behaving in an irresponsible manner.
9. Keep noise to a minimum in the morning before entering the woods. The whole world isn't up and around simply because you are. Few people welcome being awakened hours earlier than they anticipated.
10. Because no self-respecting set of guidelines has any more or fewer than ten elements, I'll reiterate the recommended practice for tree stands: Never erect a permanent stand, remove or cut branches, use wire or nails in trees or in any way alter the state or appearance of the woods without the landowner's full understanding and permission. A small change may spoil valuable lumber or, at a later date, ruin expensive equipment. The use of non-damaging, portable tree stands and climbing blocks is recommended under all circumstances where a tree stand is desired.

Because Petersham's proposed hunting ban was voted down, many fail to see the incident as a major threat to sport hunting. But each year, more and more private land is posted, and unless the trend of the slob hunter is reversed quickly and permanently, land postings will continue, as will organized efforts to keep hunters out of the woods.

Do take the threat seriously and help perpetuate our hunting privilege by becoming or helping someone else become a responsible sportsman.



PRACTICE

Before venturing into the woods in search of game, the bowhunter has the responsibility of being capable of taking his game in a quick and humane manner. This can only be accomplished by the hunter becoming familiar with the anatomy of the animal he expects to hunt (so that a vital area can be selected as a point of aim) and by developing a high degree to proficiency with his archery equipment.

The bowhunter should practice shooting at various distances from ten to forty yards with target or field points to develop basic archery skills. When the shooter can consistently shoot groups of arrows into a four-inch circle from various known distances, it is time to begin to practice for bowhunting. Allow ample time before the season to really hone your shooting skills. In my years of experience as a bowhunter, I found that most bowhunters who end up "deerless" at the end of the season do so not because they didn't see deer, but because they didn't hit the deer they shot at. For this reason, practice should be taken seriously.

Practice for bowhunting with the very same equipment you will use while bowhunting. Use broadheads starting at close range, and readjust sights if necessary. Practice with a loaded quiver mounted on your bow as well as any stabilizer, game tracker, or other accessories you intend to use while hunting. Wear your camouflage clothing, insulated underwear, sweaters, gloves, face mask or whatever you would normally wear for a hunt. It may make preseason practice a little warm and uncomfortable, but it is necessary. Extra layers of clothing can cause shooting errors due to the bowstring hitting the bow arm or an inability to achieve a consistent, full draw. These handicaps can easily be eliminated with proper practice under normal hunting conditions.

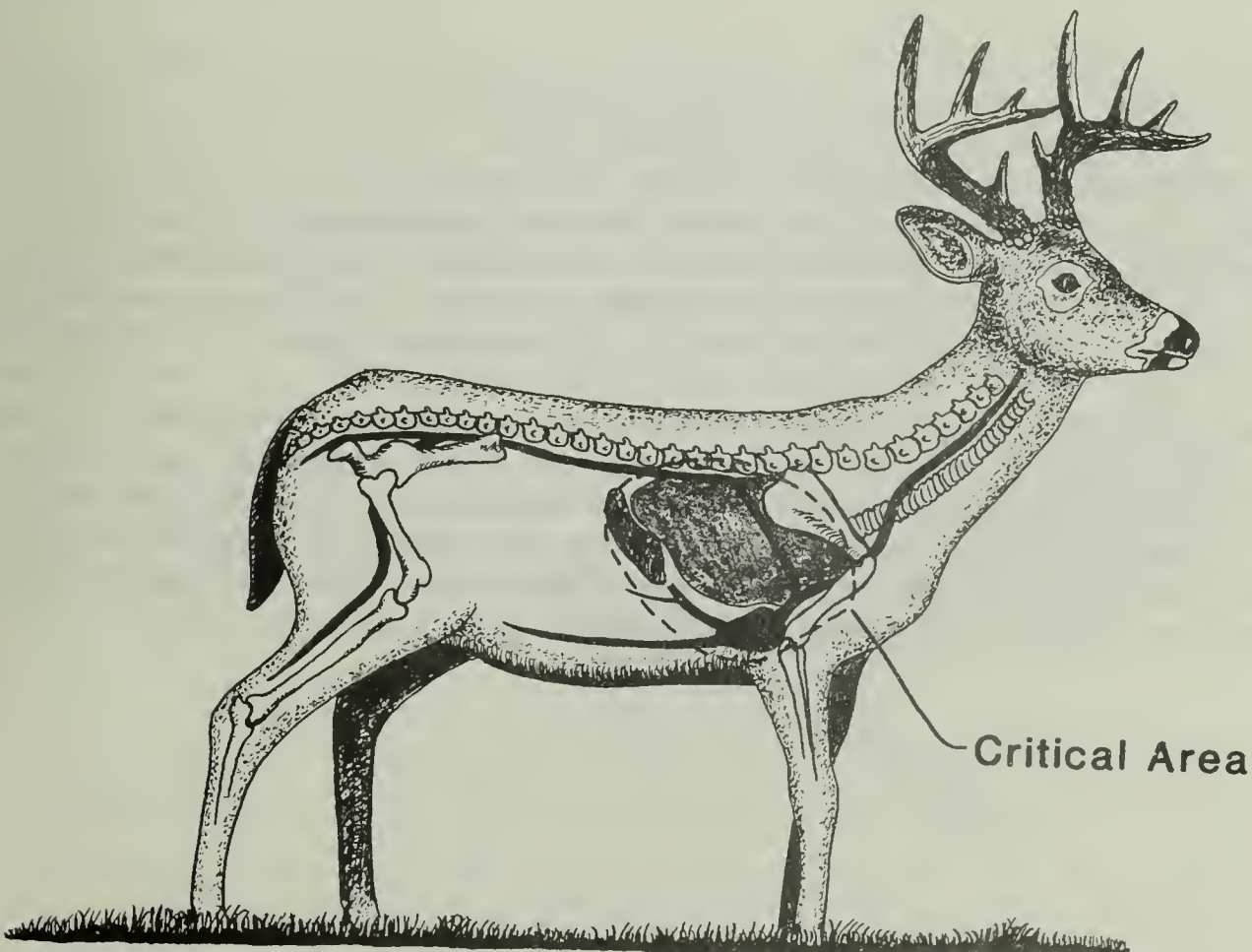
It should also be noted that deer seldom appear where you expect to see them and, for that reason, the bowman often must lean forward or to the side to shoot past obstacles which might otherwise deflect or stop the arrow. Practice shooting from various positions to include: leaning to each side, kneeling on one knee, on both knees, or standing with your back against a tree. These unorthodox shooting positions represent the majority of shots the bowhunter will be presented with. The classic archer's stance is an anomaly for the bowhunter. Do not limit your practice to level ground and open areas. Practice shooting from a tree or rooftop if you intend to hunt from a tree stand. Also shoot uphill and downhill as well as through tree branches and over bushes. Remember, you may only get one shot at a deer, bear or turkey, so learn to make that first shot count!

After you have developed your ability to estimate range and make the first shot count, learn to "pick a spot" on your target. Use life-size (or a little smaller) animal targets. Since live animals do not have circles depicting their vital areas, do not handicap yourself by

using targets which outline the vital areas or have a bull's-eye. Learn the locations of the vital organs and aim at the center. By aiming at the center of the lungs, for example, if the arrow misses the center by a few inches, it will still hit lung, liver or heart, causing a quick and humane death. Use targets which offer various views of the body such as broadside, quartering shots left and right, approaching and receding. Tree-stand hunters should obtain and practice with targets which present a view of the top of the deer's back and neck. An important note for tree-stand hunters is that when shooting downward, draw length increases at varying degrees, depending on the height of the stand and the distance from the stand the deer is located. When draw length is inconsistent, shots are missed. The bowhunter must make a conscious effort to overcome this problem.

Consider a tree stand 12 feet above the ground, and a deer 20 yards from the stand. The hunter must lean forward to aim and release his arrow. Contrary to apparent logic, the point of aim should be slightly LOWER than where the arrow is intended to penetrate. The reason for aiming lower is that when shooting upward or downward, the draw length increases which in turn imparts more energy to the arrow, giving it greater velocity and a higher point of impact. The archer has little choice; he can lean and aim slightly lower to compensate for the added draw length or stand vertically and come to full draw first, then bend at the waist, making a conscious effort to maintain a constant draw length. When choosing the latter style, the bowhunter aims at dead center as opposed to holding lower. This one technique has meant the difference between success and failure for many bowhunters.

Finally, practice under various light conditions and different types of weather. Rain, cold and wind are elements with which all bowhunters must contend. Learn to shoot under all these conditions and your chances of success will be greatly increased.



BUCK FEVER



You stand motionless in the early light, waiting for that tell-tale sound which sometimes announces the approach of a deer. You strain your eyes and ears while moving your head ever so slowly. The morning's coffee intensifies the excitement you feel, making it difficult for you to remain stationary. Soon the distant sound of crunching leaves interrupts your silent vigil, sending waves of electricity through your body. The sound stops and all is still for awhile, then it begins again, growing louder and closer. You ready your bow and await the deer. Seconds seem like hours as the sound grows nearer. With your eyes riveted to an opening in the brush, you can wait no longer when suddenly it appears! A gray squirrel scampers before you in its search for acorns. You hope the intruder passes through the area quickly so you can resume listening and watching for deer.

A few minutes later, you are again disappointed as you hear the sounds of another hunter coming toward your stand. His approach is fast and with no apparent attempt to minimize the crunching sounds his feet produce as he shuffles through the leaves. Your first reaction is a feeling of despair at selecting a promising looking area only to be disturbed by repeated intrusions. Any hope of seeing a deer this morning has been shattered and thoughts of walking around to rid your body of its kinks and shivers begin to flood your mind. Without further warning, the approaching hunter appears and "he" is sporting a nice set of heavy antlers! "Oh, my God, it's a deer! What do I do?" You bring up your bow and begin to draw, waiting for the perfect shot. The massive buck steps behind some trees and then back into the opening. Your heart pounds violently, your knees shake uncontrollably, while your breathing becomes an exercise in panting and gasping and you can no longer steady the bow. You watch the deer step between some oak trees and he is gone. Gone! and you never took a shot! You have just been victimized by a malady called "buck fever."

Buck fever is difficult to define but easy to recognize. It can take many forms and is not restricted to the presence of male deer. It is a nervous reaction to the presence of a deer which causes the hunter to forget or ignore the things he is supposed to do. It may occur the first time the hunter is close enough to a deer to shoot at it or it may occur every time.

I have heard of hunters who have ejected every shell from their guns one by one without ever squeezing the trigger. They curse their guns for the malfunction. I know of bowhunters who were so close to a deer they could almost touch it, who, after they released an arrow, admitted to not remembering whether or not they came to full draw, anchored or even aimed! I know of cases where hunters became so excited they fell out of their stands or began to speak to themselves aloud! There seems to be a direct relationship between the nearness of the deer and the degree of bewilderment experienced by the hunter. Also, the more the hunter wants that deer, the more severe is the fever.

There are some things the bowhunter can do to help prevent or, at least, minimize the effects of buck fever, but there are no guarantees.

One thing the hunter can do is to spend as much time around deer as possible before hunting season. Hopefully, the hunter can become somewhat desensitized by spending time at petting zoos, in the forest with a camera, or on practice hunts without any gun or bow. This will help a little but it will not totally eliminate the problem.

The second thing a hunter can and should do is to become totally familiar with all of his equipment. The hunter should practice until all shooting aspects become second nature and he doesn't have to evaluate each single act. Once the hunter has the confidence that he can place an arrow where he desires without making a conscious effort to do all the things he must do, he is ready for deer.

The final step to eliminating buck fever is to keep your head. If the bowhunter does not panic, he will have a good chance of scoring on a deer. The hunter must remember to move slowly and not rush the release of his arrow. It stands to reason that once a hunter is totally familiar with his equipment and can place arrows at will, all he has to do is not scare the deer away. If the deer wanders off without offering a clear shot, there is nothing a hunter can do, but if a hunter is totally prepared for the moment of truth, there is a very good chance that he will be successful.



TRACKING DEER

Many well-meaning deer hunters will readily tell you several different techniques for distinguishing the tracks of a buck from those of a doe.

You will often hear that only the heavy buck will leave the imprint of his dew claws on the ground. Some may actually be lucky enough to "prove" the point by trailing the deer and discovering a buck ahead. The truth is that both sexes possess dew claws and a heavy deer of either sex can obviously produce dew claw marks--especially in soft, moist ground or snow. The tracker always has a fifty-fifty chance of being correct in his prediction, so dew claws are irrelevant in sex determination.

You may also hear that the trail of a doe meanders erratically while the buck usually stays on a fairly straight path and close to thick cover. A doe may wander erratically at times, but a rutting buck's path is unpredictable at best and for the most part any deer which has survived the hunting pressure of previous years will usually stay fairly close to thick cover, provided it is not completely governed by raging hormonal influence.

A more widely accepted tenet is that in one-half to one inch of snow, a rack-heavy buck will create drag marks in the snow with his hooves, where the dainty, light-stepping doe will not. There is some degree of validity here but the depth of the snow is critical. Does also drag their feet and, again, it is a judgment call with little better than fifty-fifty odds.

There are three sure-fire ways to determine that an antlered deer made the track:

First, given that same blanket of snow, if the deer is feeding on forage beneath the snow, look for small indentations where the antlers touched down. If the deer has small antlers, you may be hard-pressed for evidence but a good rack will be obvious. Occasionally, a doe will bear antlers (which she almost never polishes), but hunting laws do not limit hunting to bucks only (if you were not chosen for an antlerless permit), they allude to deer with antlers less than three inches in length. Therefore, this information is useful to shotgun hunters as well. If you locate these antler marks in the snow, the deer that produced them is legal game for the gunner.

Second, when a doe urinates, she does it all at once, leaving a small opening in the snow. When a buck urinates, he is usually walking (unless visiting a scrape). When you see where urine has dribbled along the trail for a short distance, you are following a buck.

Third, this is the most reliable method. When you see a deer walking along, bearing a well-polished set of antlers, the tracks beneath it are those of a (legal) deer. Anything else you hear is merely conjecture and should be disregarded.

You will probably notice that even I didn't commit myself by attempting to identify the deer by sex except in the case of the urine. I limit my identification to whether or not the deer has a set of antlers. Since deer of either sex are legal game for the bowhunter, it is neither necessary nor important to determine a deer's sex by his track unless you are determined to shoot only at antlered deer.



BLOOD TRAILING

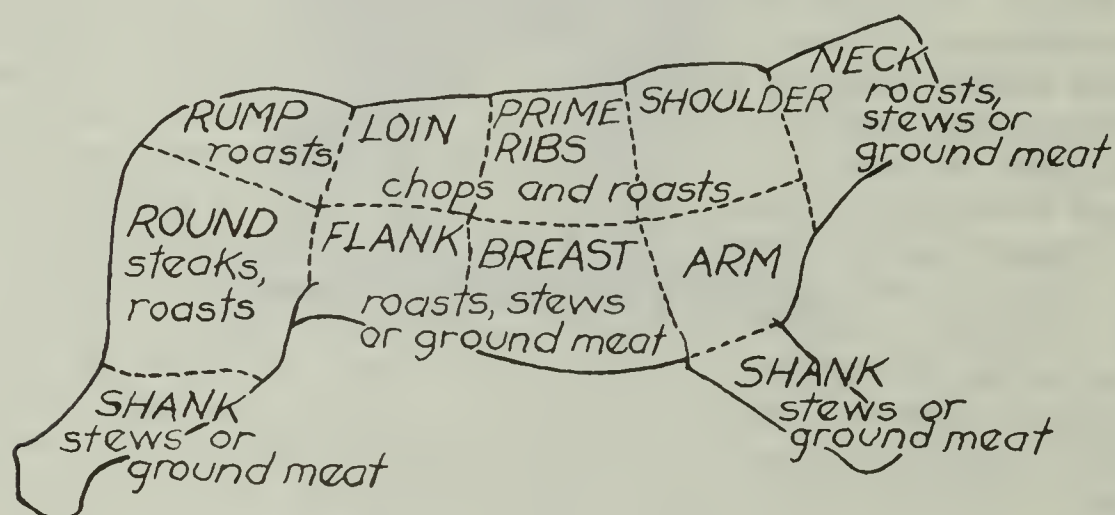
Before anyone can consider himself a responsible bowhunter, he must know how to follow wounded game via its blood trail. An arrow can pass through a vital organ such as the heart, and the deer may run off, leaving the bowhunter with the responsibility of locating and recovering his game. In most cases, unless an arrow strikes the spinal column or skull, the deer will run or occasionally, walk away. When either the skull or spine is penetrated, the deer will usually drop to the ground; any other hit will require trailing.

After shooting at a deer, the bowman may not know for certain whether or not he hit it. If the deer runs, wait several minutes (one half hour should be plenty). If the shot was missed and the deer was unaware of the hunter's presence, it may sneak back to investigate the noise that spooked it, offering the hunter a second chance. For this reason, I dab some deer lure on the vanes of my arrows which may bring the deer back for a second shot at the exact same range as the first shot. If the deer does not return, unless you are positive you missed, do not shoot at another deer! Make a mental note of the deer's location at the time when you shot, and mark your position with a piece of fluorescent tape or ribbon. Remove the broadhead from the shaft of an arrow and replace it with a judo point (see page 21). Shoot the arrow to the point where the deer was last seen as it ran into the denser forest. The judo point will prevent the arrow from tunneling under the grass and leaves, making it easy to find. Go to the point where the deer stood and look for your arrow first. If the arrow is found and it shows no sign of blood or hair, you know you missed. If you absolutely cannot find the arrow, look for hair or blood where the deer stood. White hair usually indicates a non-fatal hit in the lower part of the deer's body. If white hair is found, wait several hours before trailing unless darkness is near or it is raining. If anything resembling vegetable matter appears on the shaft or in the blood, a stomach shot is indicated and you must allow plenty of time for the deer to bed down and "stiffen" or expire. If you can find neither blood nor hair, and continued searching proves fruitless, go and find the judo-pointed shaft. Search again for blood. A deer hit high in the body may cover a great distance before blood from its wound begins to appear on the ground. If there is still no blood in evidence, take a compass reading from the point of "impact" to the point where the deer was last seen and continue slowly in that direction. Continue to mark trees at eye level with ribbon or tape. Look for upturned leaves or broken brush or branches. If blood is found, pursue slowly and quietly. A wounded deer which is not aware of the hunter's presence will usually choose the path of least resistance while passing through the woods and will usually avoid uphill travel. Look for small droplets of blood on the ground and larger spots on trees and saplings as deer will often rub the wound or attempt to break off the protruding shaft.

If the blood trail is thin, mark the last drop of blood with tape, ribbon or toilet paper before proceeding. If unable to locate more blood, begin a slow arc to either side of the trail until more blood is found. Always try not to step in the blood trail but walk to the wide whenever possible. Continue to take compass readings for the deer's general direction of travel. If the blood trail disappears, listen or

look for nearby water and you just may find your deer. If you locate your deer, approach from its back side. If the deer seems to be alive, dispatch it with another arrow. Do not walk up to an expiring deer which is still living; allow it a humane death. Do not add to its suffering by making it aware of your presence. If the deer appears to be dead, stay on its back side so if it lunges you will not be injured by antlers or hooves. Most deer will die with tongue out and eyes open and glazed. To be certain the deer is dead, touch the eye with an arrow or stick while staying away from antlers and hooves. If the deer is alive, even if it is not conscious, the eye will blink. If the eyelid doesn't twitch, try it again. If the eye remains motionless, the deer has expired. Before moving the deer, fill out and detach the deer-tag portion of your hunting license and attach it to the deer in compliance with state law. Place the tag in a waterproof container such as an old license holder and place it in the deer's mouth or ear and lash it closed. Remember to pick up all the ribbon or tape you used. If blood trailing at night, use a gasoline lantern or a fluorescent light as the blood will show up more readily than it would under a flashlight. Do not carry a bow or firearm after dark.

Before field dressing your deer, look inside the animal for the broadhead or blades. If you failed to find your arrow or if any blades were missing, you must assume they are inside the deer's carcass.



FIELD DRESSING

Field dressing, or gutting, is a messy job, not suited for the squeamish, but it is a necessary part of the successful hunt. Ideally, the hunter who "learns" the procedure beforehand will know what to do and carry out the chore quickly and easily. The fact of the matter is, the only way to really learn to field dress a deer is to try it on a real deer. If you are fortunate enough to be around when a friend or fellow hunter is dressing a deer, make it a point to observe, help, or at least ask for a crash course. Once you have learned the basic technique, you will improve with practice. I will attempt to outline the basic procedure.



Shallow-cut technique

First, make certain the deer is dead as described earlier. Then, fill out, detach the deer tag, and attach it to the deer.

Roll the deer onto its back. Find the base of the breastbone (forward of the stomach) and make a SHALLOW cut down to the beginning of the sex organ. Cut around the sex organ so the initial cut forms a "Y". After cutting past the genitals, the incisions should meet between the genitals and the anal vent, closing the "Y" momentarily before continuing the cut to and completely around the anal vent. At this time, the genitals and anal vent should be free from the body except for the internal "plumbing". Tie the anal vent shut and push it inside the body cavity

The next step is to roll the deer on its side or lift the head and shoulders to allow the drainage of blood. Place the deer back on its back and roll up your sleeves a little more.

Reach into the chest area and with a sharp knife free the lungs, liver and heart. The lungs will be a pinkish-red color and will have a consistency like that of gelatin. The heart is a darker red, about the size of a man's fist, and the liver is considerably larger than the heart and is a deep purple color. Save the liver and heart (some even save the lungs) as they are prized table fare. I have had people offer to drag my deer back to camp for the promise of the liver and heart!

Again, roll the deer onto its side and roll out the intestines. It is easiest for me if I run a hand along the inside of the rib cage toward the backbone on both sides while applying pressure to the intestines until they are out of the body cavity and on the ground. This should get rid of most of the excess fluids at the same time. The anal vent and genitals should be pulled free of the deer's body. Be very

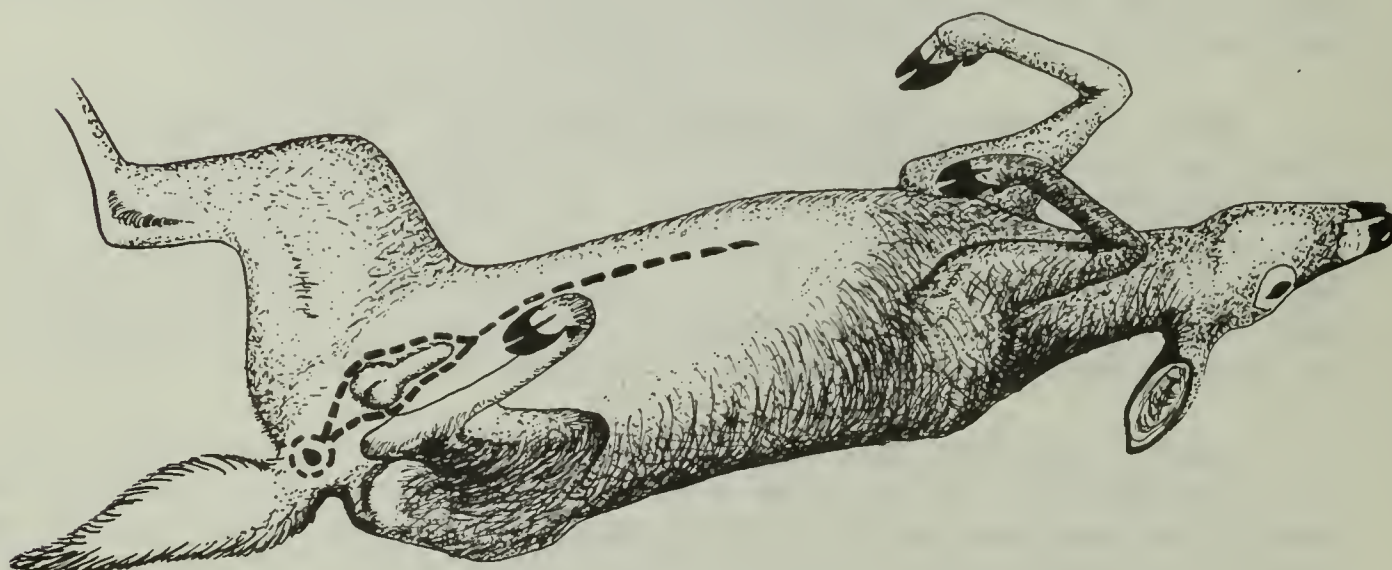
careful not to puncture or sever the urinary duct, bladder, or large intestine. Once free of the body, the duct can be severed; otherwise, tie off the urinary duct so that it cannot pass fluid. Tie it off again one-half inch from the first knot and cut between the ties; then remove from cavity. It sounds tricky, but it really isn't.

Now, roll up your sleeves as far as they will go. Reach in through the chest and up into the neck. Feel for the esophagus (it will feel like a vacuum cleaner hose). Extend your hand as far as you can and sever and remove the esophagus. If you have no interest in saving the hide or having the head mounted, you can sever the esophagus by making an incision from the outside of the neck and then pull it out through the chest. If you do wish to have your deer mounted, keep incisions as far down in the chest area as possible so the taxidermist has plenty of shoulder and neck cape to work with. If you wish to tan the hide, do not puncture it unnecessarily.

Wipe out the body cavity with a dry cloth or leaves. Do not wash the cavity as the natural fluids will dry and protect the meat if not washed away. Prop the cavity open with a stick to allow the air to cool the meat. Place the liver and heart in a bag and you're done.

There is no need to bury the intestines as the animals of the forest will make good use of them as food. Do not leave any litter.

There are variations to the procedure and some hunters do things in a different order, but this will be enough to guide you until you find your own method.



SMALL GAME



Small game hunting can be a rewarding experience and can be enjoyed throughout the year for various species. Crows, which are extremely alert, offer sport all but two months of the year. Snowshoe hare and cottontails offer split seasons which enable the bowhunter to pursue his sport in early fall and again when snow blankets the outside world. Opossum, fox, raccoon and bobcat each provide four months of hunting pleasure. Birds such as pheasant and grouse separate the neophytes from the veterans. The pheasant's propensity to run and the grouse's explosion through the trees usually guide them to safety before the bowmen can draw back his arrow.

Hunting small game is perhaps the most efficient means of practice for larger game. This sport requires the hunter to stalk his prey, take those difficult shots around trees and over bushes, and learn to make the first shot count. A day's outing for small game can involve several species in the same area, offering several shots throughout the day. Because the target is smaller than the big game hunter is accustomed to, the archer is forced to pick a spot and concentrate before his release or lose an arrow and head. For this reason, inexpensive heads should be a consideration and old shafts should be the rule.

Because small game hunting often provides more shooting than searching, it can rapidly develop into a bowhunter's favorite sport. Camouflage and stealth can be just as important when hunting crows, fox and bobcat as when hunting deer, bear or turkey.

A small game bowhunting trip can help the deer hunter learn the areas the deer are using. It can help put the hunter in better physical condition and it offers a serenity unknown to armchair quarterbacks and patio chefs.

Perhaps the greatest benefit derived from small game hunting with bow and arrow is that it can be a family adventure. Bowhunting parents can use the sport as a means of teaching their children respect for the animals they hunt and the environment we share with them. Responsibilities are learned in a setting where there are few distractions and where lessons can be taught by example.

Small game bowhunting will not put a trophy head over the mantle, but it may prepare you for the moment when that trophy head appears.

THE NATIONAL BOWHUNTER EDUCATION PROGRAM

The National Bowhunter Education Program (NBEP) is a complete course of instruction for all bowhunters regardless of their experience. Each program is conducted by a minimum of two certified instructors who volunteer their time to help fellow bowhunters learn the safest and most effective way to enjoy their sport. The course includes four to six hours of instruction in a classroom setting and two hours of "field experience" where students can participate in shooting and "blood trailing" exercises.

The program features the latest in visual aids and materials and the use of large charts with heavy emphasis on class participation. "Bowhunting Deer" by William Wadsworth serves as the text for the classes and is considered by many to be the finest book in print on bowhunting deer.

Some of the topics covered include landowner-hunter relations; responsibilities to wildlife, the environment and other hunters; bowhunting equipment selection and maintenance; bowhunting safety, first-aid; deer anatomy; bowhunting methods; bowhunting regulations and more.

Bowhunters who successfully complete the program are awarded a certificate of qualification which is honored throughout the 50 United States, Mexico and Canada, wherever a bowhunter safety course is required before a license can be purchased.

Most programs are held at rod and gun clubs or sportsmen's clubs which are offered to us at no charge. Students must preregister for courses and a maximum of 35 students per course is the rule. Currently, the cost is \$5 per student which covers the cost of materials used during the classes. Special private courses can be arranged for clubs or groups provided facilities are provided and the instructors are given a minimum of 30 days prior notice.

For more information or to arrange for a private program for your club, contact:

National Bowhunter Education Foundation
Dan McGuinness, Secretary-Treasurer
Freeman Avenue
Webster, Massachusetts 01570

ANSWERS TO QUIZ

1. The age of a deer is determined by either weighing the lens of the eye under laboratory conditions; examining teeth for wear and replacement (Tanck-Severinghaus), or by section analysis (Sergeant-Pimlott). The important point is that age cannot be determined by the number of points on an antler.
2. The major differences in antler structure are: mule deer rarely develop spiked antlers and as development increases, the main beam on each side forks into a "Y". Whitetails often sport spikes for their first set of antlers and then, as the antlers develop in subsequent years, points project from the main beam which generally does not fork. Also, the whitetail antlers grow first toward the sides then flare out to the front and finally grow upward. The antlers of the mule deer grow first out to the sides then dramatically upward.
3. The average whitetail is not as large as many beginners think; it is approximately 30 to 34 inches tall at the shoulders, smaller than a horse.
4. The major contributing factor is diet. Antler size and development are also influenced by age and heredity.
5. Tie some fine thread across a run from one small tree to another so that the line is about four to six inches above the ground and fairly slack. Return to the run often to see if the thread has been broken. The ends where the thread broke will point in the direction of the deer's travel. Simply narrow the time between rigging and checking the thread and you will get a picture of how often and at what times the run is being used.
6. The tail will twitch nervously and if it hovers in a straight-out (horizontal to the ground) position, the deer is ready to run.
7. Again, we must look to the deer's tail for the clue. Although there are NO HARDFAST RULES OF DEER BEHAVIOR, deer often develop a pattern which the hunter can use to his own advantage. Most of the time, when a deer acts in the manner described, the tail will swish from side to side once before the head jerks upward. Watch the deer to determine his pattern and the time interval between lowering his head to feed and raising it again. The timing is important because your movements must be slow as you raise your bow, draw, aim and release. A quick movement on your part may send the deer out of sight instantly.
8. Fawns are usually born from 200 to 210 days after conception. Since the majority of does are bred in November, most fawns in our state are born around the end of June when food and cover are most plentiful.

9. Whether or not land is legally posted, if a landowner asks you to leave his property, you must do so immediately and politely. The time to identify yourself as a responsible sportsman and request permission to hunt is long before hunting season.
10. The unwritten law of the bowhunter, which has slowly become accepted, is sometimes called the rule of first blood and mortal wound. This means that the first person to wound a deer in a vital area causing a sufficient blood trail he can follow, and thus having a good chance of reducing the deer to his possession (were it not for the presence of other hunters), may claim the deer. Any hunter drawing first blood who feels that he would not in fact have been able to reduce the deer to possession (due to a superficial wound) should relinquish his claim in favor of the next person to make a vital hit.
11. If you shoot at the running deer, you will most likely miss it or, worse, wound it in a non-vital area. Since a wounded deer is not a consolation prize, you should not shoot at the deer. Now consider the advancing dogs. You have no legal right to shoot at the dogs; only certain law enforcement officials may shoot dogs caught running deer. In this case, your best move is not to act but to notify the area's natural resource officer.
12. Actually, regulated sport hunting has never caused any species to become endangered; commercial hunters cannot make such a claim. If sport hunting were stopped, game herds would grow in number for a few years until the number of animals exceeded the food supply of their habitat. Habitat would be destroyed and disease and death would occur due to starvation. In summary, if sport hunting were stopped, wildlife, habitat, conservation and management agencies would all suffer.
13. As is often the case, buck fever has set in! Sometimes the bowhunter becomes so excited with the closeness of the deer, he forgets to pick a spot at which to aim. If one aims at the whole deer or if he points instead of aiming, he will often miss the deer and watch in disbelief as the deer makes its escape.
14. Do not leave trash in the woods! Even if the trash is buried, some animal may come along and smell the trash and unearth it, creating an eyesore to anyone using the woods. The best idea is to anticipate trash and bring a plastic bag for its disposal. Bring the trash out of the woods and dispose of it properly.
15. Yes, live weight can be determined within a couple of pounds by the following methods. You could obtain a conversion table by writing to the Massachusetts Division of Fisheries and Wildlife, or you could use this "simple" mathematical formula: multiply the dressed weight times 10 to the fifth power (add five zeroes to the dressed weight) and divide the product by 78,612. This is fairly accurate. Dressed weight equals (arbitrarily) 125 pounds $\times 10^5 = 12,500,000$; $12,500,00/78,612=159.0088$ pounds live weight.

